
Stem cell progress on brain awareness week

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This week marks Brain Awareness Week, with events worldwide to bring people up to speed on brain research. I went to the cool search tool on the Dana Foundation web site and found that several CIRM grantees are hosting events this week. That makes sense, given that roughly a quarter of our funding goes to neuronal diseases. (You can see charts of CIRM stem cell research funding allocations here. The charts are slightly out of date - stay tuned for some updates in the next month.)

Brain diseases are seen as a big challenge for stem cell therapies, in part because the brain itself is such a complex web of neurons. Simply replacing a few lost neurons won't necessarily replicate the lost connections. We have a story discussing some of those issues and describing innovative approaches CIRM grantees are taking to developing new cures for brain diseases.

The good news is that some CIRM grantees are learning that stem cells can be coaxed to form the support cells in the brain that nourish neurons. These support cells could be what provide a therapy for diseases such as ALS, MS, stroke and spinal cord injury. Other grantees are using stem cells in the lab to test new drugs for Parkinson's disease.

A group at UC Davis is attempting to use the body's own mesenchymal stem cells to preserve unaffected neurons in people with Huntington's disease. This technique won't bring back lost cells, but saving additional cells from dying off could prevent some of the terrible side effects of the disease.

Another team of CIRM grantees at UC Irvine found that at least in rodents, stem cells were able to repair some memory loss due to Alzheimer's disease. This work is a long way from treating humans, but still provides hope for people who have lost loved ones to this devastating disease. Here's a video we produced about that work:

We've produced several other videos about CIRM's brain related research:

- Fred H. Gage talks about using embryonic stem cells to model neuronal disease
- Spinal Cord Injury: Progress and Promise in Stem Cell Research
- Huntington's Disease: Progress and Promise in Stem Cell Research
- Parkinson's Disease: Progress and Promise in Stem Cell Research
- Spotlight on ALS seminar
- Spotlight on Huntington's disease seminar
- Spotlight on Alzheimer's disease seminar
- Spotlight on Batten disease seminar
- Spotlight on Parkinson's disease seminar

- A.A.

Tags: Neurobiology, Parkinson's Disease, Alzheimer's, ALS (Lou Gehrig's Disease), multiple sclerosis, huntinton's disease

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